

EXPERT REPORT

Republic Services of Indiana, Limited Partnership

vs.

Coe Heating & Air Conditioning, et al.

Case No. 1:21-CV-00108

United States District Court, Northern District of Indiana, Fort Wayne Division

Prepared for:

Lewis Kappes, P.C.
One American Square, Ste. 2500
Indianapolis, Indiana 46282

Prepared by:

James P. Foster, CFI, CEFI, CVFI
7850 Parkdale Drive
Zionsville, Indiana 46077

November 18, 2022

Qualifications and Publications

I am a Certified Fire Investigator, a Certified Fire and Explosion Investigator, and a Certified Vehicle Fire Investigator. Throughout my career, I have conducted more than 1,400 fire investigations including numerous residential and commercial structure fires. I hold a Pro Board certification through the National Board on Fire Service Professional Qualifications as a Fire Investigator, NFPA 1033. I have also received certifications through the National Fire Academy, Public Agency Training Council, and many other agencies. A copy of my *Curriculum Vitae*, which includes all publications I have authored in the past ten (10) years and a description of my qualifications, is attached as **Appendix 1**.

Overview of Opinions

On December 3, 2019, after thorough analysis of the site and artifacts from the site, I provided my opinions to Republic Services about the cause and origin of the March 19, 2019 fire which is the subject of this lawsuit. Additional examinations have been conducted since that time and more information has been analyzed. However, my initial conclusions from the December 3, 2019 report remain unchanged. Those conclusions are as follows:

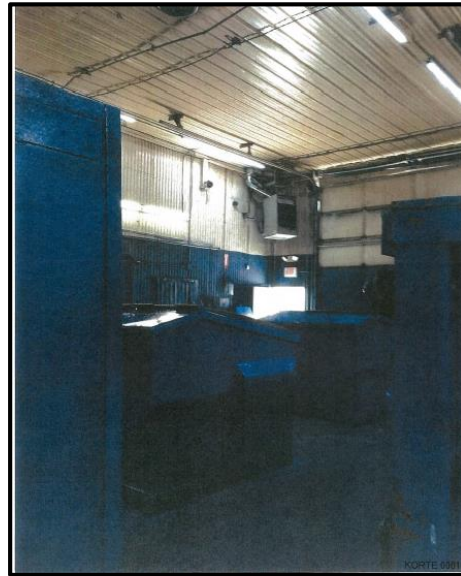
1. A fire occurred inside the maintenance structure located along the west side of the property. The fire involved the south end of the structure where trash dumpsters were repaired and finished.
2. The fire involved the south end of the facility where ceiling tube heaters had recently been installed.
3. The cause and origin of the fire is a direct result of the open infrared tube heaters installed in an area where painting and other procedures were performed. The installation of this type of heater is not recommended in this environment. (See expert report of Nicholas Ozog). Paint and other flammable products used in the repair of trash dumpsters collected on and inside the tube heaters and ignited.

Factual History

A fire occurred at the Republic Services ("Republic") facility located 6231 MacBeth Road, Fort Wayne Indiana on March 19, 2019. At the time, I was employed as a Fire Consultant at Rimkus Consulting Group, Inc. ("Rimkus"). A representative from Republic retained Rimkus after the fire to evaluate the origin and cause of the fire and to determine if recently installed heaters may have contributed to cause the fire.

The building which suffered the fire loss was a maintenance repair and employee locker and office building. The area where the fire appeared to have originated was at the south end of the building where Republic's trash dumpsters were repaired and repainted.

The dumpster maintenance included operations such as repairing, sanding, patching, and repainting dumpsters. Work in this included the use and storage of flammable and other combustible materials. Welding was also done when needed to repair metal components on the dumpsters. Painting operations occurred in the area on a daily basis using commercial spray paint machines. Witnesses described the room as being covered in blue overspray and paint “dust” from painting activities. Photographs of the interior of the paint area before the fire are depicted below:



The painting area, according to employees, operates during the daytime hours and the area is cleaned each day. Based on interviews with witnesses on scene, on the day of the fire, work had been completed in the south end of the building. This work included welding to repair trash dumpsters, as well sanding and painting throughout the day. Work in the paint area was completed around 3:00 p.m. and employees had cleaned the area following the completed work day.

There were no indications of any problems at the time the employees left the facility at 4:00 – 4:30 p.m. A facility manager, Fred Jones, completed a walk through that included the maintenance facility where work had been done. He observed all lights and doors secured. Nothing was observed that was out of ordinary. There was no indication of any problems when that observation was completed at approximately 6:00 – 6:30 p.m.

Based on information obtained from witnesses, including Republic employees on scene, 3 Space-Ray infrared gas tube heaters had been installed in the paint and welding area within the past two months. The heaters were supplied by electrical power and propane fuel. There had been no problems related to these heaters prior to the fire event.

Based on information obtained from witnesses and other documents, Coe Heating and Air Conditioning ("COE") had installed the heaters around January 19, 2019. The instruction and installation manual for the heaters contain the following warning:

This heater is not an explosion proof heater. Where the possibility of exposure to volatile and low flash point materials exist, it could result in property damage or death. This heater must not be installed in a spray booth where the heater can operate during the spraying process. Consult your local fire marshal or insurance company.

A fire was reported to 911 after employees working outside the building observed fire and smoke coming from the building near the Middle East overhead door. They indicated flames appeared to be coming from the top of the building. The fire increased and upon fire department arrival had spread throughout the painting area throughout the south end. The fire was extinguished and most of the south end of the building area had collapsed.

On March 20, 2019, I was employed by Rimkus Consulting as a Fire Consultant. Republic Services engaged Rimkus to investigate the fire to determine if the cause and origin could be determined. I visited the site on March 20, 2019. During my initial examination and throughout the investigation, I applied the methodology of fire investigation using a systematic approach as recommended by the National Fire Protection Association, NFPA 921 – "Guide for Fire and Explosion Investigations" and NFPA 1033 "Standard for professional Qualifications for Fire Investigator."

After arriving, I determined that the loss and time required to investigate the scene would take more time and would require heavy equipment to evaluate the damage and secure evidence from the scene. Photographs and additional information was obtained from Republic Services' employees, including the site manager, Kyle Orr. I interview Mr. Orr and other witnesses on scene. After my initial investigation, it was determined that additional parties, including Coe Heating and Air Conditioning, Inc. (Coe) and Gas Fired Products, Inc. (Space-Ray) needed to be notified and a joint examination of the site was needed.

A joint examination of the site was conducted on March 3, 2020. During this inspection, the heaters were uncovered from the fire debris for examination. I observed paint and other debris on the tube heaters, on the reflector assembly around the tube heaters, and inside the ventilation tubes of the heaters. Charring and heat damage to the east tube heater was greater than damage to the other tube heaters. This indicates the fire origin occurred in the east heater near the control box associated with the ignition of the propane fuel. A buildup of paint was observed in the ventilation pipe and reflector assembly of other tube heaters and in the tube heater of fire origin. The fire patterns on the metal roof were discolored and charred more than other metal sheeting along the sides of the building. The discoloration of the metal indicated the fire started high in the building. Information from employees was high in the building upon discovery. This combine with the fire damage to the south heater that was at ceiling level indicated the possible location of origin.

Based on witness interviews, other potential ignition sources from other electrical components were turned off at the time of the fire loss. According to employees, everything had been turned off when leaving at 4:30 p.m. on the date of the fire. While there is evidence individuals may have smoked inside or near the facility on occasion, all individuals finished working in the maintenance area by late afternoon. Accordingly, the passage of time between any employees being inside or near the maintenance area and the time of the fire loss remove potential cigarettes as a potential source. Similarly, while welding operations had occurred earlier in the morning of the day of the fire, all operations had ceased for more than 12 hours before the fire occurred. Several employees had indicated over the time period following the welding operation that there were no odors or indications of fire potential. The area was cleaned at 4:00 p.m. and checked again at 6:00 p.m. with no indication of problems.

Information provided at the time of the fire site examination indicated temperatures prior to the fire were higher than what the settings were for the thermostat. Once the temperature dropped the ignition of the infrared gas tube heaters ignited. This occurred prior to the fire discovery. The heaters were the only source of ignition in the area of origin. In summary, other potential ignition sources were identified in the general area of the fire origin. However, these other potential sources were ruled out due to their location and origin location.

During the joint examination on site, I retrieved paint samples and other debris samples from inside the tube heaters. I packaged them securely and sent them to Forensic & Scientific Testing, Inc. for laboratory analysis. On April 14, 2020, Ms. Sharee B. Wells, F-ABC (Forensic Scientist) provided the results of the laboratory analysis. The samples came back positive for petroleum distillate, consistent with ignitable liquids. (See Lab Results, attached as **Appendix 2**).

During joint examination, the three (3) gas tube heaters were securely retrieved and transported to Rimkus' secure facility in Indianapolis.

At the request of Lewis Kappes, I prepared an initial investigation report, dated December 3, 2019, based on information available at the time, including but not limited to my own visual observations of the site and debris on scene, lab results from the debris analysis, as well as interviews I conducted with multiple witnesses on scene. My initial report is incorporated in this report and attached as **Appendix 3**.

The following images and descriptions were contained in my initial report:

Photograph 1

East end of building at location identified as the paint room.



Photograph 2

Paint and other combustibles material inside ventilation pipe of tube system



Photograph 3

Tube heater components and paint on reflector of unit, In area of fire origin.



Photograph 4

Tube heater and paint on reflector along with charring and more heat on this heater unit than others. Indication origin area.



A laboratory examination of the tube heaters and other evidence from the site was conducted on February 24, 2022 at Rimkus' facility in Indianapolis. The items were inspected and were stored back in the indoor evidence storage room after the examination. Procedures for multi-party examinations were followed in accordance with ASTM E860. (See November 18, 2022 letter from Louis Inendino, attached as **Appendix 4**).

A second laboratory joint examination took place at Rimkus' secure facility on August 23, 2022. I observed burn patterns on the testers, which showed fire damage more severe at the middle or center heater and fire and heat damage on the north heater showed heat and fire spread from the south side or middle or center heater. The fire and heat damage pattern on the south heater showed heat and fire spread from the north side or middle or center heater. Based on my training and experience, these patterns indicate the spread of heat and damage as it related to the origin. The lab examinations of the tube heaters did not change my opinion of the ignition source of the fire from my initial report (see **Appendix 3**).

Materials Considered

In accordance with NFPA 921, I considered all information I observed during the multiple site investigations and laboratory examinations. I also have relied upon statements and information provided by witnesses on site immediately following the fire, including but not limited to Kyle Orr. I have also considered transcripts from certain depositions which have occurred in this case, including the depositions of Kyle Orr, Samir D., Fred Jones, etc. I have considered the photographs and other files retained by Rimkus in the file relating to this fire loss.

I have considered the Occupational Safety and Health Administration's 1910-107 Spray Finishes guidance. I have considered the MSDS sheet from the product manufacturer. I have relied on my training and experience as a Certified Fire Investigator with 40 years of experience as a fire and hazardous materials technician and fire service. I reserve the right to supplement this portion of my report as additional information becomes known or available.

Methodology and Basis of Opinions

All inspections were conducted pursuant to NFPA 921. My opinions were formulated using NFPA 921 as a guide. I also relied on my personal observations, interviews with eyewitnesses, deposition transcripts from witnesses in this case, laboratory results from FAST, and other available information provided to me.

Specifically, I observed build-up of paint and debris on the three Space-Ray heaters, the deflectors, and inside the ventilation tubes of the heaters. I also observed the charring and burn patterns on the heaters and on and around the structure. I also considered the positive results from the laboratory. My observations are reinforced by photographs taken on scene and in the laboratory inspection at Rimkus.

Statement of Compensation

My hourly rate for work on this assignment and any testimony is \$150 per hour, excluding expenses.

Previous Testimony

I have testified in the following case(s) in the past four (4) years:

- o Newegg, Inc., et al. v. Inland Products, Inc., et al., Cause No. 49D07-CT-005221
Marion Superior Court 7, Indianapolis, Indiana.

Conclusions

My initial conclusions from the December 3, 2019 report remain unchanged. Those conclusions include the following:

1. A fire occurred inside the maintenance structure located along the west side of the property. The fire involved the south end of the structure where trash dumpsters [were] repaired and finished.
2. The fire involved the south end of the facility where ceiling tube heaters had recently been installed.
3. The cause and origin of the fire is a direct result of the open infrared tube heaters installed in an area where painting and other procedures [were] performed. The installation of this type of heater is not recommended in this environment. (See expert report of Nicholas Ozog). Paint and other flammable products used in the repair of trash dumpsters collected on the tube heaters and ignited.

I reserve the right to supplement this report as additional information becomes known.

James Foster
James P. Foster

Date: November 18, 2022

APPENDICES

Appendix 1

Curriculum Vitae

James P. Foster, CFI, CFEI, CVFI

Fire Consultant

Jim.Foster451@aol.com

7850 Parkdale Drive

Zionsville, IN 46077



Background

Mr. Foster is a Certified Fire Investigator, a Certified Fire and Explosion Investigator, and a Certified Vehicle Fire Investigator.

He received his Pro Board certification through the National Board on Fire Service Professional Qualifications as a Fire Investigator, NFPA 1033. He has received certifications through the National Fire Academy, Public Agency Training Council, and other agencies. Mr. Foster was also a reserve officer with the Noblesville, Cicero, and the Hamilton County Sheriff Departments. He was the chief investigator with the Madison County Indiana Fire Investigation task force.

As a prior State of Indiana certified fire instructor, he has instructed courses throughout the state related to fire service topics and certification courses related to fire, investigations, firefighter, EMS, and hazardous materials.

Mr. Foster has performed fire origin and cause investigations, interviews, and interrogations of suspects and witnesses and has testified in criminal cases involving law enforcement activities. He has given depositions and court testimony in findings and technical related issues as an expert witness. Areas of expertise include, management of fire scene investigations, fire scene analysis, evidence and data collection, monitoring of destructive and non-destructive testing, investigative interviews and scene photography. Mr. Foster has conducted over 1,400 fire investigations encompassing residential and commercial structures, vehicles to include farm and industrial vehicles, farm structures, RV's, alternative fuel vehicles, and fatal fires.

Professional Engagements

• Fire/Arson Investigations

- Fire Investigator – Carmel, IN (1995 – 2016), Worked directly with other shift investigators to investigate fires in the city of Carmel and in Hamilton County, IN.
- Fire/Arson Investigations – Markleeville, IN (1985 – 1996), Investigated fires and arson throughout the Adams Township.
- The Madison County Fire Investigation Taskforce – Madison County, IN (1990 – 1996) Fire/Arson Investigator / Chief Investigator for taskforce.
- Fire Investigator – varied locations (2014 – 2018), Investigated cause and origin of fires throughout Indiana

• Instructor/Subject Matter Expert

- Fire Fighter and EMS Certification – varied locations (1975 – 2018), Taught courses to fire and police to meet certification requirements of the State of Indiana certifications; Over 2000 hours
- EMT Courses – Indiana, Taught courses to certify fire personnel along with others as an EMT in Indiana. Over 1,400 students certified throughout the time of Instruction.
- Fire Certification Education – Indiana, Taught courses on firefighting, investigations, inspection, and hazardous materials.

Forensic Engagements

• Fire, Arson and Explosion Investigations

- Commercial, residential, industrial, vehicles, marine vessels, farm equipment, construction equipment, off road vehicles
- Fire fatality and burn victim investigations
- Fire protection/alarm systems analysis

• Instructor/Subject Matter Expert

- Classroom and hands-on classes in fire origin and cause identification to fire and police departments

• Field Research for Fire Scenarios

- Appliance failures
- Ignitable liquids
- Chemical fires
- Explosions, NG, LPG, Hazardous Materials, Incendiary
- Vehicles, automotive, truck, motor homes, marine, off road, heavy equipment, industrial equipment

Professional Experience

• Independent Fire Consultant

2020 - Present

• Rimkus Consulting Group, Inc.

2018 – 2020

• Fire Consultant – Fire Division

Responsible for investigating fire and explosion causation in commercial structures and facilities, residential structures, automobiles, industrial and heavy equipment. Investigate fires involving appliances and electrical devices. Assess potential liability issues. Collect, document and preserve evidence to ensure chain of custody, conduct interviews with witnesses, responding firefighters, state fire marshal agencies and other pertinent third-party individuals and organizations.

Prepare detailed, written investigative reports pertaining to the origin and cause of fire losses. Provide expert technical and scientific support to clients for litigation purposes.

- **EFI Global** **2014 – 2018**
 - Senior Fire Investigator
Responsible for investigating fire and explosion causation in commercial structures and facilities, residential structures, automobiles, industrial and heavy equipment. Investigate fires involving appliances and electrical devices. Assess potential liability issues. Collect, document and preserve evidence to ensure chain of custody, conduct interviews with witnesses, responding firefighters, state fire marshal agencies and other pertinent third-party individuals and organizations. Prepare detailed, written investigative reports pertaining to the origin and cause of fire losses. Provide expert technical and scientific support to clients for litigation purposes.
- **Carmel Fire Dept.** **1995 – 2016**
 - Lieutenant, Firefighter, Paramedic, Shift Fire Investigator
Provide EMS and Fire services to the residents of Carmel and responding areas through 911 emergency calls. Fire Officer responsible for station and engine response and personnel assigned. Shift fire investigator responsible for investigating fires in the response district and community where requested. Fire response responsibilities include incident command, size-up and fire attack and fire scene safety. EMS response responsibilities include providing emergency medical care to medical or trauma related patients. Fire and EMS instructor providing education to other departments in the community and surrounding counties. Computer and data entry responsibilities as an officer entering reports and response CAD system. Continuing education requirements to maintain EMS, fire, Haz-mat and investigation certifications.
- **Hamilton County Emergency Medical Services** **1975 – 1995**
 - Shift Supervisor, Paramedic, EMS Instructor
Responsibilities included responding to EMS related calls in Hamilton County Indiana. Providing Advanced Life Support to residents and citizens of the county and response area. Providing education and training to members of the service and to other communities and the county fire services. EMS related instruction to various agencies including EMT, paramedic and fire certification courses.
- **Madison County Emergency Management** **1985 – 1995**
 - Chief Fire Investigator
Responsibilities included responding in Madison County Indiana to assist local fire departments investigating fires and explosions. Responsible for the fire investigation task force members scheduling and maintaining education requirements. Report writing and data entry related to the investigation and provide testimony in court related to the investigation and findings. Interviews with witnesses and firefighters and third parties related to events and to the investigation.
- **Hamilton County Sheriff Dept.** **1987 – 1996**
 - Reserve Officer
As a member of the reserve division was responsible for providing law enforcement activities for the Hamilton County community including, Road patrol, Investigate accidents, criminal arrest and courtroom testimony. As a sergeant was responsible for other reserve members in the division. Review reports and provide education to members. Responsible for the Hamilton County Court system providing security and safety. Responding to emergencies within the community involving accidents and criminal activity. Conducting interviews and arrest. Collecting evidence related to criminal or accidental activities.
- **Fire Departments** **1973 – 2016**
 - Firefighter, Paramedic, Instructor and Fire Investigator

Worked as part-time employee and volunteer for a number of fire departments.

Fishers Fire Dept: Part-time employment responsible for response to 911 related calls for fire and EMS. Providing education and training for members to obtain and maintain certifications. Provide fire inspections to local businesses using fire and building codes.

Noblesville Fire Dept.: Part-time employment responsible for response to 911 related calls for fire and EMS.

Westfield Fire Dept.: Part-time employment responsible for response to 911 related calls for fire and EMS.

Adams Township Fire Dept.: Volunteer member of the department responsible for fire and EMS response to emergency calls in the community. Captain of the department responsible for fire investigations and incident command when needed.

Chesterfield Union-Township Fire Dept.: Volunteer member of the department responsible for fire and EMS response to emergency calls in the community. Fire Marshal for the department responsible for business inspections and fire investigations.

Education and Certifications

- **Certified Fire Investigator:** Internal Association of Arson Investigators, Inc., #14-101758 (2016)
- **Certified Fire Investigator:** National Board on Fire Service Professional Qualifications, #10688- 10659 (2015)
- **Certified Vehicle Fire Investigator:** National Association of Fire Investigators, #10688-10659v (2014)
- **Certified Safety Officer:** State of Indiana, #6656-1339 (2014)
- **Instructor II and III:** State of Indiana, #14111 (2005)
- **EMT-Primary Instructor:** State of Indiana, #6656-1339 (2004)
- **Paramedic license:** State of Indiana, #6656-1339 (2004)
- **Fire Inspector I and II:** State of Indiana, #14111 (2003)
- **Fire Medic IV #14111 & Driver Operator Pumper:** State of Indiana, #14111 (2001)
- **Instructor II and III:** State of Indiana, #14111 (2000)
- **Fire Officer I and II (NFPA) / Firefighter I and II (NFPA) / Instructor First Class:** State of Indiana, #14111 (1999)
- **Fire Investigator I (NFPA):** State of Indiana, #14111 (1998); Illinois (#129.433174)
- **Hazmat Technician & Instructor Second Class:** State of Indiana, #14111 (1994)
- **Fire Service Management:** State of Indiana, #14111 (1992)
- **Fire Arms Qualification (Sharpshooter):** Hamilton County Sheriff's Department, (1991)
- **Law Enforcement Academy (Reserve):** Hamilton County Sheriff's Department (1989)
- **EMS Management Development Program:** Indiana University, (1986)
- **EMS Primary Instructor Course:** State of Indiana, (1985)
- **Second Class Firefighter Certification Course:** State of Indiana, (1980)

Continuing Education


- **CFI Trainer.net:** Over 230 hours (tested) NFPA 921 and 1033 compliant (2006-2018)
- **Public Agency Training Council:** Forensic Pathology for Investigators (2017); Investigative Techniques Using Social Networking Sites & Vehicle Fires Investigation, 24 hours (tested) (2016); Detective and New Criminal Investigator &

- Arson Scene Search (2014); Fire and Arson Fatality Fire Scene Investigation & Meeting the Requirements of NFPA® 1033 (2013); Fire Service Leadership and Ethics (2012); Cults, Occults and Satanic Crimes Investigation, 16 hours (tested) (1999)
- **National Fire Academy:** Interviewing/Interrogation Techniques and Courtroom Testimony (2014); Indianapolis Fire. Electrical for the Fire Investigator, 16 hours (tested) (2013); Forensic Evidence Collection (2011); Fire / Arson Origin and Cause Investigations (2008); Plans Review for Inspectors & Hazardous Materials Operating Site Practices (2003); Principles of Fire Protection Structures and Systems (2002); Fire Inspection Principles (2001); ALS Response to Hazardous Materials Incidents (1999)
 - **IAAI:** Ohio IAAI Chapter, NFPA 921 Update 8 hours (tested) & Alternative Fuel Vehicles NFPA, Fire Investigation Edition, 8 hours (tested) (2017); Indiana IAAI Chapter Conference, Live Burn Cells, Vehicle Fires, Fire Pattern Progression and Analysis, Evidence Collection, Sampling and Spontaneous Heating, 21 hours (tested) (2017); Illinois IAAI Chapter Conference, 24 hours (tested), Case Studies, Ventilation and Flow Effects, Fire Dynamics, Arc Mapping, Fire Patterns, Fire Scene Reconstruction, NFPA 921 / 1033 Related to Explosion Scene Examination and Documentation, Household Appliance, Gas Fires, Identify Evidence of Failure (2016); Indiana IAAI Conference, 21 hours (tested) (2015); Indiana IAAI Chapter Conference, 21 hours (tested) Indiana IAAI Conference, 21 hours (tested) (2014); Illinois IAAI Chapter, Vehicle Fire Investigations, 16 hours (tested) (practical) (2014); Indiana IAAI Chapter Conference, 21 hours (tested) Basics of Fire Investigation, Forensic Scene Examination and Evidence Collection, Fire Debris Analysis, Truck and Bus Fires, Origin and Cause in Diesel, Alternate Fuel and Hybrid Vehicles, Use of Alternate Light Sources (2012); Indiana IAAI Chapter Conference, 21 hours (tested) NFPA 921 / 1033 Updates, Fatal Fire Investigations, Building's Electrical System Assisting in Area of Origin (Arc Mapping), Post- Flashover Fires, Ventilation Importance, Propane and Natural Gas Systems and Fires, CSST Investigations and Litigation, Propane and Natural Gas Appliance Fires (2011); Ohio IAAI Chapter, Vehicle Fire Investigations, 32 hours (tested) (practical) (1996)
 - **International Code Council:** IDHS Fire-Resistive Construction Provisions of the IBC, 8 hours (tested) (2003); IDHS Means of Egress Provisions of the IBC, 7 hours (tested) (2003); Overview of the International Fire Code, 14 hours (tested), Indiana General Administrative Rules, 8 hours (tested), Structures & Systems IBC, 4 hours (practical) (2003); 2000 IBC Hazardous Materials Course, 6 hours (tested) (2005);
 - **Fire Department Instructors Conference:** Cause and Origin, A Systematic and Comprehensive Investigation, 4 hours, Axiom of Leadership, 8 hours (tested) (2003); Cause and Origin Systematic Investigation, 4 hours, Truck Company Operations, 4 hours, Hazardous Materials Chemistry, 4 hours, Public Information Management, 4 hours, Inspection of Covered Malls with Assembly Occupancies, 4 hours (practical) (2002); Fire Department Instructors Conference, Advanced Origin and Cause, 4 hours, Incident Safety Officers Academy, 8 Hours (tested), Gathering Building Intelligence 4 Hours, Building Fire Pump Testing, 4 hours (practical) (2004);
 - **Fire Department Courses:** DFL Honor Guard Training, Carmel Fire Department 40 hours (tested) (practical) (2010); St. Vincent's Hospital, Carmel Fire Department, Human Cadaver Lab Practical (2009); Carmel Fire Department, Leadership Course, 8 hours (tested) (practical) (2008); Fire Department Instructors Conference, Reading Buildings/ Size-up, 4 hours (2012); CSX Transportation, Emergency Response to Railroad Incidents, 21 hours (tested) (2008); Cicero Fire Department, State of Indiana, Master Firefighter Tactics Course 80 hours (Tested) (1998); Indiana Fire Instructors Association, Indianapolis Fire School, Fire Death Investigation, 8 hours (1995); Anderson Fire Department, State of Indiana, Fire Service Management Course, 60 hours (tested) (1992); Richmond Fire Department, State of Indiana, Fire/Arson Investigation Course, 64 hours (tested) (1990); Fishers Fire Department, State of Indiana, Fire Prevention Course, 60 hours (tested) (1990); Target Solutions, Carmel Fire Department, NFPA 1500 Hazard Communication, 4 hours (tested) (2015); Target Solutions, Carmel Fire Department, NFPA 1001 Personal Protection Equipment, 4 hours (tested) (2014); Carmel Police Department, Who, What, When, Where and How Fire Death Investigation, 8 hours (1996);
 - **Federal Programs:** National Insurance Crime Training Academy, Smoke and Ash Fraud Investigation, 4 hours (tested) (2018); U.S. Department of Justice, Communication Skills, Report Writing and Courtroom Testimony for Forensic Analysts, 4 hours (tested) (2017); Emergency Management Institute (FEMA) IS-100 Incident Command, 40 hours (tested), IS-700 Incident Command, 16 hours (tested) (2005); US Department of Homeland Security, WMD Hazardous Materials Evidence Collection, 16 hours (tested) (practical), WMD Crime Scene Management, 8 hours (tested) (practical) (2004); Federal Bureau of Investigations, Legal Matters, Probable Cause, Evidence, Search and Seizure, Arrest Procedures, Liabilities and Interrogation, 6 hours (1986);

- **Forensic:** West Virginia University, Forensic Science 101, 8 hours (tested), Principles of Death Investigation, 4 hours (tested), Forensic Evidence Collection, 8 Hours (tested) (practical), Forensic Photography, 8 Hours (tested) (practical), Interviewing/Courtroom Testimony, Expert Witness (2013); International Association of Special Investigation Units, Arson Investigative techniques, 6 hours (tested) (2012)
- **Other:** I Sight , Investigating on the Dark Web, 1 hour (2018); Indianapolis Fire, Police and GMRC Special Investigations, Origin and Cause and Burn Cell Demonstration, 7 hours (tested) (2016); National Insurance Crime Training Academy, Using Social Networking for Investigations, 4 hours (tested) (2016); Improvised Explosive Devices, Health Issues at the Investigation Scene, Public v/s Private Fire Investigations, Cadaver Dogs, Investigating Fatal Line of Duty Deaths, Ethics Review (2016); National Insurance Crime Training Academy: Insurance Fraud Investigation, 4 hours (tested) (2016); Investigating Vehicle Theft Fraud, 4 hours (tested) (2016); Wayne Twp FD, Indianapolis Fire, State of Indiana FMO, Practical Fire Scene Investigation Course, 16 hours (tested) (2014); Blue Card Incident Command Program Certification, 80 hours (tested) Practical (2013); Insurance Fraud Seminar, NSPII, IAAI, IASIU, ATF, From the Fire Scene to the Courtroom, 8 hours (tested) (practical) (2013); Fire Department Training Network, Engine Company Operations I, 24 hours (tested) (2011); Indiana Alliance of Hazardous Materials Responders, Response to Cargo Tank Truck Emergencies, 16 hours (tested) (2004); Ward Manufacturing, CSST Gas Line Installation Training, 4 hours (2001); National Technology Transfer, National Fire Alarm Code, 14 hours (tested) (practical) (2001); EL Du Pont Company, Hazardous Materials Technician Refresher Training, 16 hours (tested) (practical) (1993); State of Indiana, Hazardous Materials Technician Course, 80 Hours (tested) (1991); State of Indiana, Fire/Arson Investigation & Fire Prevention/Inspection & Strategy and Tactics #14111 (1990)

Appendix 2

Forensic and Scientific Testing Laboratory Results

	FORENSIC AND SCIENTIFIC TESTING	21 Industrial Dr. Thorsby, AL 35171 Phone: 205-646-0071 E-Mail: swells@fast-lab.com	Page 1/2
<i>ISO 17025:2005 & FRA-1:2008/1 Accredited</i> Certified Laboratory Report			
CCMI Glenn Bell 17015 N. Scottsdale Rd Scottsdale, AZ 85255		Date: April 14, 2020 D.O.L.: 3/19/19 Date Collected: 5/10 & 3/6/20	
Insured: Republic Services Claim #: F923689		FAST, Inc. Case #: FRM-3-62249 Dates of Analysis: 3/11-4/14/20	
Investigator: Jim Foster Investigator Case # 58406186 Exam request: Ignitable Liquid Residue		Evidence Delivered on: 3/11 & 4/13/20 Delivery Method: Fed Ex/USPS	
<p>Items</p> <ol style="list-style-type: none"> 1. Gallon can listed as containing swabs of South end heater and inside tubes 2. Gallon can listed as containing swabs of central tube heater 3. Gallon can listed as containing swabs of N end of tube heater 4. Quart can listed as containing Medium Blue WR Protective enamel by Sheboygan Paint Co. 5. Quart can listed as containing comparison CVS gauze (4/13/20) 			
<p><u>METHOD</u></p>			
<p>The above material was prepared by the charcoal vapor concentration technique (ASTM E1412-19) and subjected to gas chromatographic-mass spectrometric analysis (ASTM E1618-19).</p>			



FORENSIC
AND
SCIENTIFIC
TESTING, INC

Page 2 of 2

RESULTS AND INTERPRETATIONS

Items 1 and 2 contained a similar mixture of an aromatic product, a medium petroleum distillate and a heavy petroleum product.

Items 3 and 4 contained a similar mixture of an aromatic product and a medium petroleum distillate. Items 3 and 4 did not contain a heavy petroleum product.

Products in the range of a heavy petroleum product include, but are not limited to, some types of, some types of vehicles used in staining products, mineral spirits and other proprietary formulations.

No ignitable liquid residues were identified in Item 5, the comparison gauze.



A handwritten signature in black ink, appearing to read "Sharee B. Wells", enclosed within a rectangular box.

Sharee B. Wells, MS, F-ABC
Forensic Scientist

Appendix 3

Dec. 3, 2019 Report



Rimkus Consulting Group, Inc.
5804 West 74th Street
Indianapolis, IN 46278
Telephone: (317) 510-6484

December 3, 2019

Mr. Glenn Bell
CCMSI
17015 North Scottsdale Road, Ste. 325
Scottsdale, AZ 85255

Re: Insured: Republic Services
Rimkus File No: 058406186
Subject: Report of Findings

Dear Mr. Bell:

On March 3, 2019, a fire occurred at the Republic Services facility located at 6231 MacBeth Road in Fort Wayne, Indiana. The structure was used for maintenance work on bins and had space for employee lockers and offices.

Rimkus Consulting Group, Inc. (Rimkus) was retained by CCMSI to determine the origin and cause of the fire and to determine if recently installed heaters contributed to the cause. This report was reviewed by Otto Soyk, Jr, IAAI-CFI, (V). Fire division manager.

In the course of our work, the facility was inspected and photographed on March 21, 2019. A second site examination was completed on May 10, 2019, to uncover heaters recently installed from fire debris. A joint examination was completed at the site on July 2, 2019, involving representatives of Coe Heating and Air conditioning company.

During our investigation, we applied the methodology of fire investigation using the systematic approach as recommended in the current edition of National Fire Protection Association, N.F.P.A. 921 - "Guide for Fire and Explosion Investigations and N.F.P.A. 1033 "Standard for professional Qualifications for Fire Investigator".

Conclusions

1. A fire occurred inside of the maintenance structure located along the west side of the property. The fire involved the south end of the structure where trash dumpsters are repaired and repainted.
2. The fire involved the south end of the facility where ceiling tube heaters had recently been installed.

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3. The cause and origin of the fire is a direct result of open infrared tube heaters installed in an area where painting and other procedures are performed. The installation of this type of heater is not recommended in this environment. Paint and other flammable products used in the repair of trash dumpsters collected on the tube heaters and ignited.

Discussion

A fire occurred at the Republic Services facility located at 6231 Mac Beth Road, Fort Wayne, Indiana. The facility is a waste and recycling business. The building involved in the fire loss was a maintenance repair and employee locker and office building. The area where the fire originated was at the south end of the building where trash dumpsters were repaired and repainted.

The dumpster maintenance included repairing, sanding, patching, and repainting the dumpsters. Work in this area included the use of flammable and other combustible materials. Welding was also done when needed to repair metal components. On the date of the fire, work had been completed in the area of origin. This work included welding to repair trash dumpsters. Sanding and painting operation had been done during the day. Work was completed around 3:00 p.m., and employees had cleaned up the area following the completed work day.

There were no indications of any problems at the time the employees left the facility at 4-4:30 p.m. A facility manager had completed a walkaround that included the maintenance facility and the area where work had been done. There was no indication of any problems when that observation was completed at 6:00 to 6:30 p.m.

Three Space Ray Ceiling tube infrared heaters, model PT125-30L5 had been installed in the paint and welding shop area within the past two months. The heaters were supplied by electrical power and propane fuel. There had been no problems related to the heat prior to the fire event.

Coe Heating and Air Conditioning company had installed the heaters around January 19, 2019. Another unidentified heating and air company had been consulted to install the style of heat in the building and advised against this type of heater use in the area due to welding and paint operations. The instruction manual related to the model installed further states that "this heater is not an explosion proof heater. Where the possibility of exposure to volatile and low flash point materials exist, it could result in property damage or death. This heater must not be installed in a spray booth where the heater can operate during the spraying process. The heater is a self-contained infrared radiant tube heater for use in location where flammable gases or vapors area not generally present."

The area there the heaters were installed was considered the welding and paint area. The facility did not meet NFPA code or compliances of a spray booth. The location

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where work was performed allowed paint and other materials to accumulate on the hot surfaces of the heaters and other areas of the heater.

Other potential ignition sources were in the general area of fire origin however were not considered a potential due to their location and origin location. The fire origin was reportedly high in the structure when first observed which would place it at or near the ceiling. The use of these style of heaters installed by Coe Heating and Air Conditioning contributed to the ignition of paint and other combustible vapors and paint dust and particles located on the heater components over the time period when they were installed and when the fire occurred.

All other ignition sources were turned off prior to the employees leaving for the day at 4:00 p.m. The only ignition source identified was the tube heaters that was thermostat controlled. When the heater activated, the spark to ignite the gas and heat ignited the combustibles that had accumulated on the surface and burners of the tube heaters.

There was no destructive examination done with the heaters. The heaters were uncovered from the fire debris for examination. Paint and debris were observed on the tube heaters, the deflectors, and inside of the ventilation tubes of the heaters. Charring and heat damage to the east tube heater was greater than damage to the other tube heaters. This would indicate the fire origin occurred in the east heater near the control box associated with the ignition of the propane fuel. A buildup of paint was observed in the ventilation pipe and reflector assembly of other tube heaters and in the tube heater of fire origin.

The fire patterns on the metal roof were discolored and charred more than other metal sheeting along the sides of the building. The discoloration of the metal indicated the fire started high in the building. Information from employees indicted the fire was high in the building upon discovery. This combined with the fire damage to the south heater that was at ceiling level indicated the possible location of fire origin. Other potential ignition sources from other electrical components were turned off at the time of the fire loss. According to employees, everything had been turned off when leaving at 4:30 p.m. on the date of fire.

Welding operations that had occurred earlier in the day had stopped at 11:00 a.m. on the day of the fire, and no combustibles were in the area where welding had been taking place. The fire was reported at 11:15 p.m. There were no indications of any problems or issues regarding the welding operations for the over 12 hours following the welding operations. Several employees had indicated over the time period following the welding operation, there were no odors or indications of fire potential. The area was cleaned at 4:00 p.m. and checked again at 6:00 p.m. with no indication of problems.

A joint examination at the site was conducted on July 2, 2019, with Coe Heating and Air Conditioning company. Following the joint examination, a letter was received requesting information on several products and items that were inside of the facility and

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nearby the origin. The information was forwarded to Republic Services for them to respond to the request.

On November 15, 2019, Republic Service requested a short-written report of our findings.

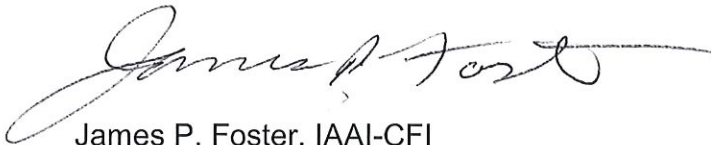
Photographs taken during our work were retained in our files and are available to you upon request.

This report was prepared for the exclusive use of CCMSI and was not intended for any other purpose. Our report was based on the information available to us at this time. Should additional information become available, we reserve the right to determine the impact, if any, the new information may have on our opinions and conclusions and to revise our opinions and conclusions if necessary and warranted.

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

THE ORIGINAL OF THIS REPORT, SIGNED BY THE PROFESSIONAL WHOSE NAME APPEARS ON THIS PAGE, IS RETAINED IN THE FILES OF RIMKUS CONSULTING GROUP, INC.

Sincerely,
RIMKUS CONSULTING GROUP, INC.

A handwritten signature in black ink, appearing to read "James P. Foster", with a long horizontal flourish extending to the right.

James P. Foster, IAAI-CFI
Fire Consultant

Attachments: Photographs, Curriculum Vitae

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Photograph 1

East end of building at location identified as the paint room.



Photograph 2

Paint and other combustibles material inside ventilation pipe of tube system



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Photograph 3

Tube heater components and paint on reflector of unit, In area of fire origin.



Photograph 4

Tube heater and paint on reflector along with charring and more heat on this heater unit than others. Indication origin area.



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Photograph 5

Paint on reflector of another tube heater assembly.



Photograph 6

Paint and other products on tube heater components in another location.



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Photograph 7

Paint and charring on tube heater assembly in area of fire origin.



Photograph 8

Tube heater reflector top side and damage observed in area of fire origin.



Appendix 4
Nov. 18, 2022
Letter from Louis Inendino, P.E.



5804 West 74th Street
Indianapolis, IN 46278
(317) 510-6484

November 18, 2022

Mr. Thomas Jones
Lewis Kappes
One American Square, Suite 2500
Indianapolis, IN 46282

Re: Style: Republic Services of Indiana, LP vs. Coe Heating & Air
Conditioning, Inc./Gas-Fired Products, Inc./Space-Ray
Rimkus Matter No: 058406186

Dear Mr. Jones:

On March 19, 2019, a fire occurred at the Republic Services facility located at 6231 MacBeth Road in Fort Wayne, Indiana.

Evidence from the fire scene was collected by Rimkus on May 11, 2020. Each piece of evidence was logged and tagged before it was retained. A list of the evidence that was collected and retained follows (with exhibit numbers):

- A – 0: Inlet air pipe to burner (south)
- A – 1: Tube heater section 1 – (south)
- A – 2: Tube heater section 2 – (south)
- A – 3: Tube heater section 3 – (south)
- A – 4: Flue south to exhaust pipe
- A – 5: Flue/tube pipe to heater – (south)
- B – 1: Middle heater
- B – 2: Middle heater tube
- B – 3: Middle heater tube
- B – 4: Middle heater output air

- C – 0: Inlet air, north heater
- C – 1: Northmost heater
- C – 2: Heater tube, north heater
- C – 3: Heater tube, north heater
- C – 4: Heater tube, north heater
- C – 5: Outlet air vent, north heater
- D – 1: Bin/debris – section C below north heater
- D – 2: Trash bin remains, north heater area
- E: Gas pipe – A to B west (gas pipe)
- F: Gas pipe – B to C west (gas pipe)
- F – 1: Gas pipe adjacent to A-1 heater section
- F – 2: Pipe adjacent to A-2 heater section
- F – 3: Pipe adjacent to A-3 heater section
- G – 1: Pipe section adjacent to C-1 heater section
- G – 2: Gas pipe section adjacent to C-2 heater section
- H – 1: Pipe section – C to B east
- H – 2: Pipe section - B to C east
- H – 3: Pipe section – A to B east
- I: Gas piping (vertical) leading to C-heater
- J: Metal can, fire safe below middle (B) heater
- K: Debris from below A-1 heater head

Rimkus evidence tags were affixed to each of the evidence items listed above at the fire scene and the evidence was logged. Many of the evidence items, with the exception of gas piping, were shrink-wrapped at the fire scene. The evidence was placed inside a passenger vehicle or secured to a flatbed trailer at the fire scene. The evidence was transported to the indoor evidence storage room at the Rimkus office in Indianapolis, Indiana, where it was unloaded from the vehicles and secured.

Some of the evidence items were removed from evidence storage for a multi-party examination that took place at the Rimkus office in Indianapolis on February 24, 2022. If shrink-wrap was removed from any of the items to facilitate the multi-party examination, it was replaced following the examination. The items inspected were again placed in the indoor evidence storage room at the conclusion of the examination for continued preservation.

An additional multi-party examination took place at the Rimkus office in Indianapolis on August 23, 2022. If shrink-wrap was removed from any of the items to facilitate the multi-party examination, it was replaced following the examination. The items inspected were again placed in the indoor evidence storage room at the conclusion of the examination for continued preservation.

The items listed above have remained in the custody of Rimkus since they were collected from the fire scene, and they will continue to remain in the custody of Rimkus until further direction is received.

Procedures for collecting and preserving the evidence described in this letter were followed in accordance with Chapter 17 (Physical Evidence) of NFPA 921 (Guide for Fire and Explosion Investigations) and ASTM E1188 (Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator). Procedures for the multi-party examinations of the evidence addressed in this letter were followed in accordance with ASTM E860 (Standard Practice For Examining And Testing Items That Are Or May Become Involved In Litigation).

Thank you for allowing us to provide this service. If you have any questions or need additional assistance, please call.

Sincerely,
Rimkus

Digitally signed by: Louis V
Inendino

Date: 2022.11.18 12:08:50 -05'00'

Louis V. Inendino, NAFI-CFEI
Practice Leader